

(No Model.)

R. W. SCOTT.

NEEDLE PICKING TOOL FOR KNITTING MACHINES.

No. 407,125.

Patented July 16, 1889.

FIG. 1.

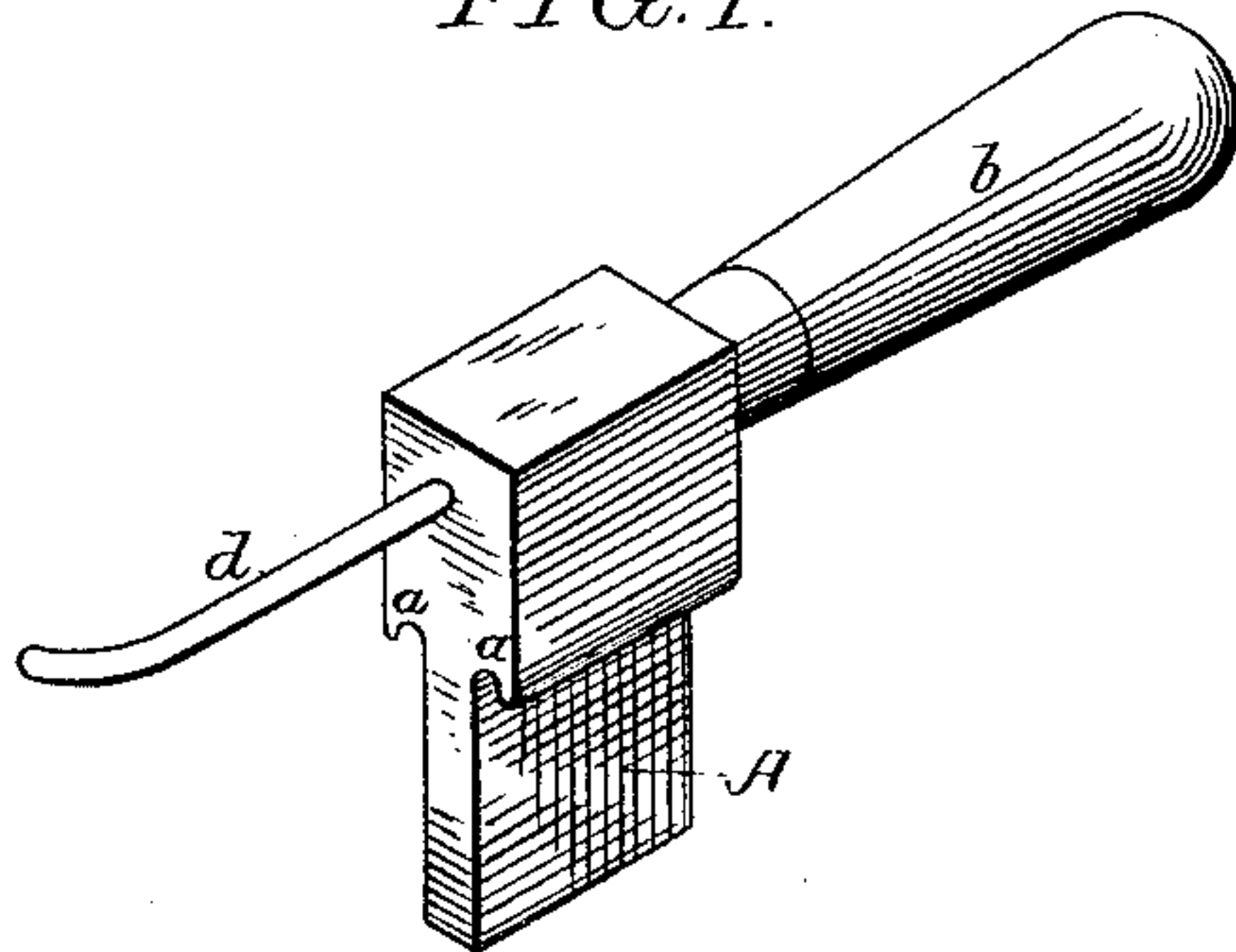


FIG. 2.

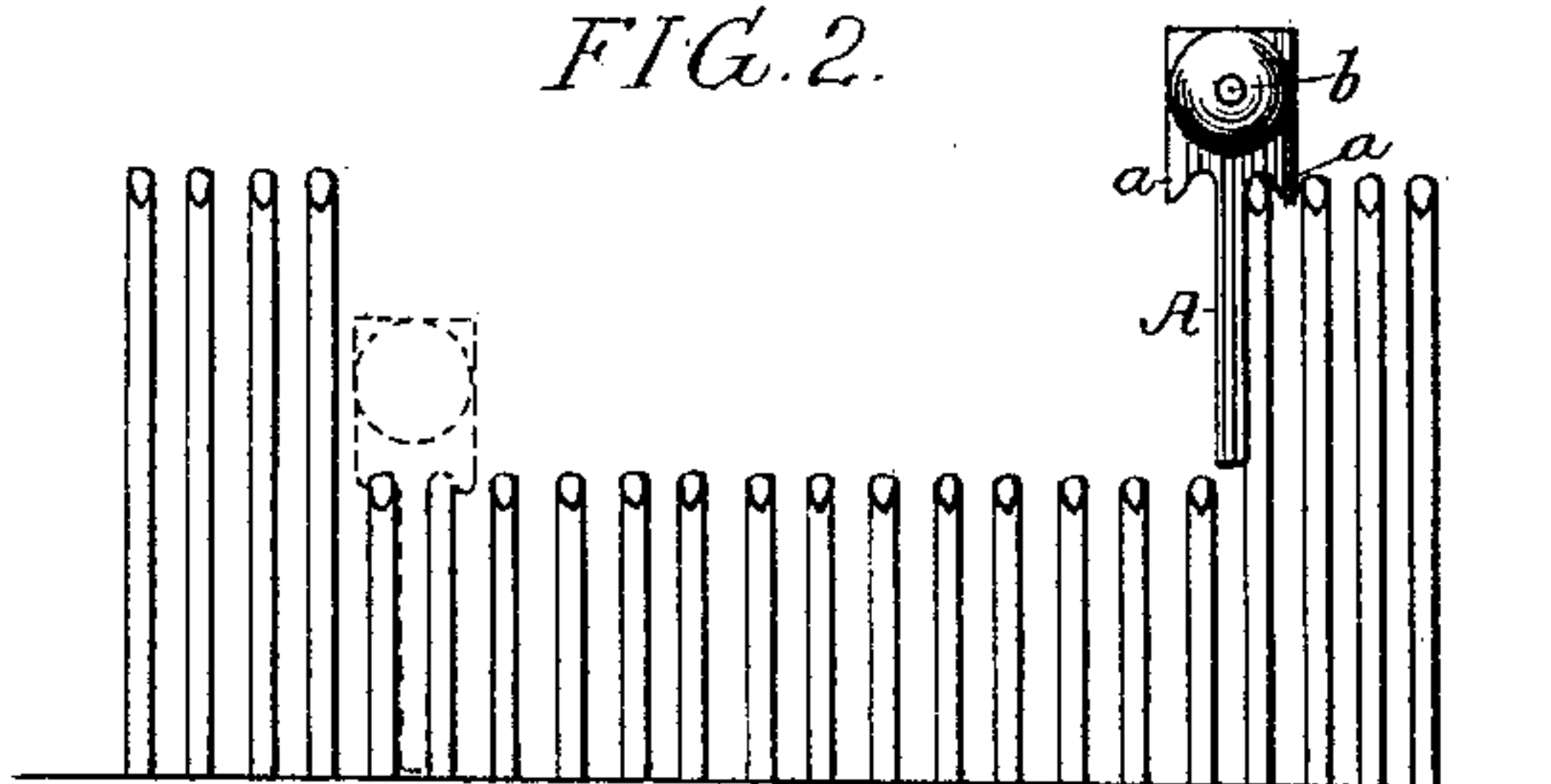


FIG. 4.

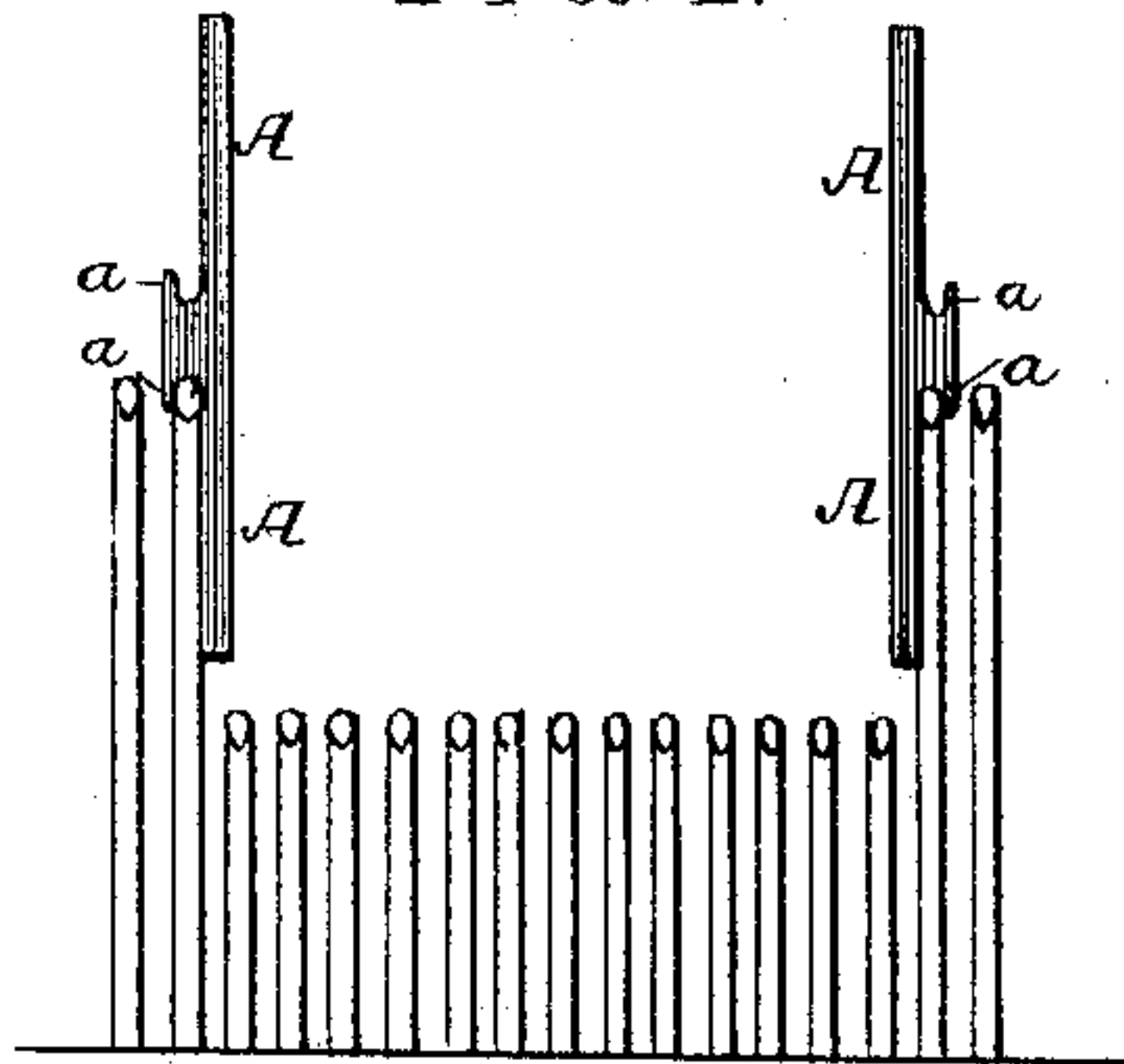
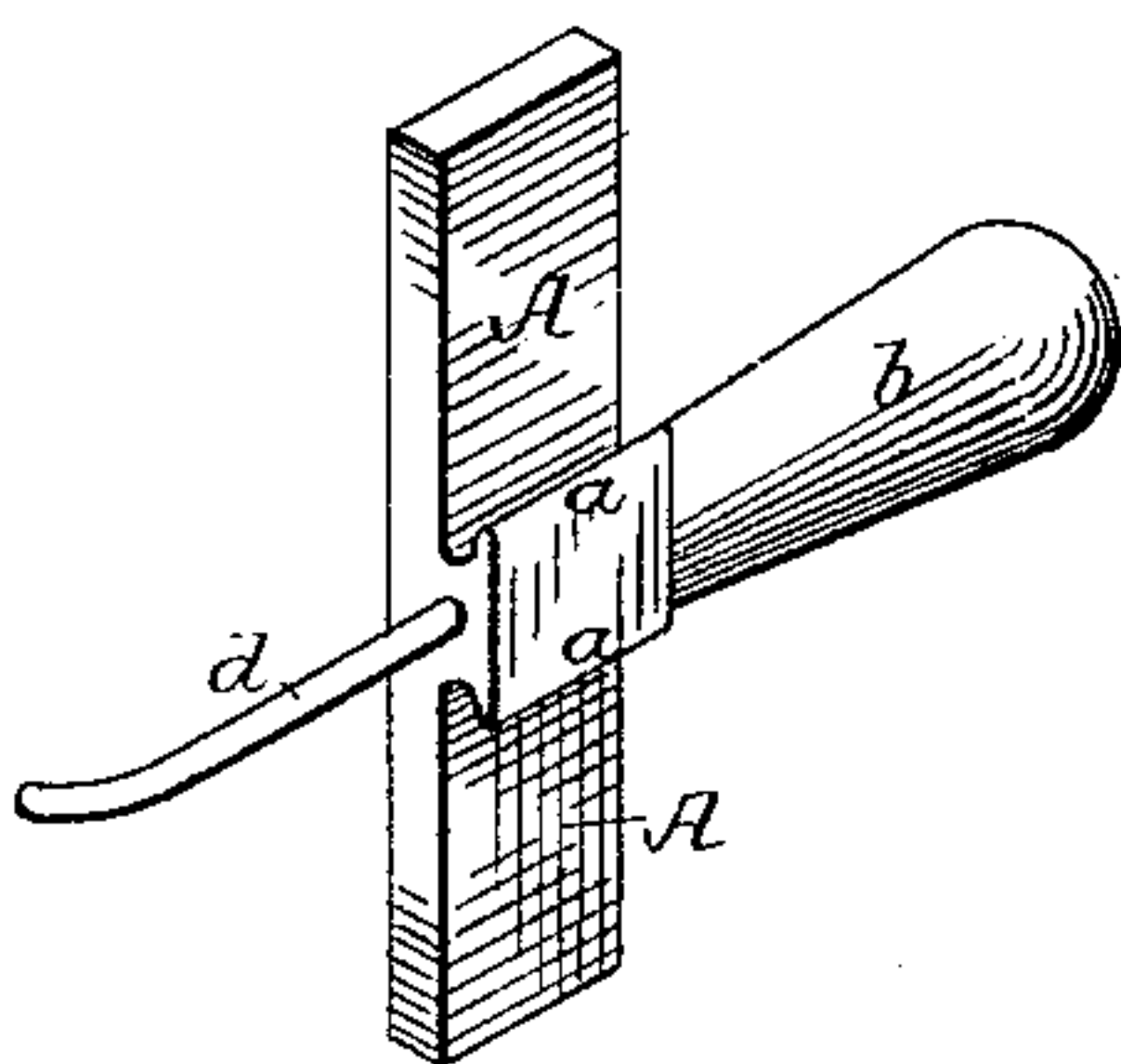


FIG. 3.



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UNITED STATES PATENT OFFICE.

ROBERT W. SCOTT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO LOUIS N. D. WILLIAMS, OF SAME PLACE.

NEEDLE-PICKING TOOL FOR KNITTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 407,125, dated July 16, 1889.

Application filed April 29, 1889. Serial No. 308,947. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. SCOTT, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented an Improved Needle-Picking Tool for Knitting-Machines, of which the following is a specification.

The object of my invention is to provide a simple and efficient device whereby the needles of a knitting-machine may be readily and accurately manipulated to throw them successively into and out of action as required in the production of toe or heel pockets or like bulging portions upon a knitted web; and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved needle-operating device. Fig. 2 is a diagram illustrating the mode of using the same, and Figs. 3 and 4 are views illustrating a modification of the device.

There are many knitting-machines in which needles are elevated from their normal or operative position, so that their bits are carried beyond the control of the operating-cams and the needles thus rendered inoperative, a subsequent lowering of the needles rendering them again operative. Such needles are intended mainly for the production of webs having bulges or pockets thereon, such pockets being formed by first lifting out of action a certain number of the needles simultaneously without casting off their stitches, and then after each course of stitches on the remaining needles raising out of action a needle of said acting set, first at one end and then at the other end of the set, until the web has been narrowed to the desired extent, the needles thus raised retaining the stitches last formed on them, and being afterward successively depressed, so as to be thrown into action again until the web has attained the same width as before the narrowing operation began. It is the usual practice to push down these inoperative needles by hand, and the attendant must exercise considerable care and skill in performing this operation; otherwise there is a liability that the wrong needle, or more than one needle, may be pushed down,

thus spoiling the work or necessitating the picking of the needle back into operative position again, thus causing loss of time.

The device which forms the subject of my invention has been devised mainly for the purpose of facilitating and rendering certain the proper depression of the needles into operative position, and said device consists, simply, of a bar or finger A, the upper portion of which is somewhat wider than the lower portion, so as to form opposite shoulders *a*, the bar being provided with a suitable handle *b*, and, preferably, with a projecting prong or finger *d*, which is available for picking the needle from the depressed or operative position to the raised or inoperative position in effecting the narrowing of the web. The principal purpose of the device, however, is to effect the depression of the needles, and for this purpose the bar A is pressed laterally against the raised or inoperative needle at one end of the acting set, one of the shoulders *a* overlapping the head of said needle sufficiently to insure the depression of the same into acting position when the bar is moved downward, but not sufficiently to incur any risk of engaging with the next inoperative needle. The bar A is preferably of such depth that when its lower end comes in contact with the top of the needle-cylinder the needle acted on by the shoulder *a* will have been depressed to the proper extent to render it operative, although this is not essential to the proper carrying out of my invention, as the descent of the bar may be arrested by contact of its opposite shoulder with the top of the end needle of the depressed or acting set.

By reason of the opposite shoulders *a a* the device can be used first to depress the needle at the right-hand end of the acting set, and then to depress the needle at the left-hand end of said set; and, if desired, the device may be made with both shoulders upon one side of bar, but between the opposite ends of the same, as shown in Fig. 3—for instance, the bar being reversed after acting upon a right-hand needle, so as to be in position to act upon a left-hand needle, as shown in Fig. 4.

Although I have shown the device as con-

stituting a hand-tool, it will be evident that it can be embodied in a machine whereby the manipulation of the needles is effected automatically.

5 Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The within-described needle-picking device, consisting of a bar for bearing against the side of the needle to be depressed, said bar
10 having a shoulder for overlapping the head of the needle and engaging with the same as the bar is lowered, substantially as specified.

2. The within-described needle-picking device, consisting of a bar for bearing against
15 the side of the needle to be depressed and having two shoulders, one for engaging with needles of the right hand and the other for engaging with needles of the left hand, substantially as specified.

20 3. The within-described needle-picking de-

vice, consisting of a bar for bearing against the side of the needle to be depressed, said bar having shoulders on opposite sides of the same for engaging with the heads of the needles, substantially as specified.

4. The within-described needle-picking device, consisting of a bar for bearing against the side of the needle, said bar having a shoulder for engaging with the head of the needle, and being provided with a suitable operating-
30 handle and with a projecting needle-lifting tongue or prong, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT W. SCOTT.

Witnesses:

WILLIAM D. CONNER,
HARRY SMITH.